Johns Manville
A Berkshire Hathaway Company

TRYMER® LOW INDEX PIR

DATA SHEET LIBRARY

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Johns Manville
A Berkshire Hathaway Company

DESCRIPTION

Trymer®200L polyisocyanurate foam is a cellular polymer supplied in bunstock form. It is ideal for applications in which a lightweight, low-density core material is needed. This product is easily fabricated into sheets and other shapes and is less brittle than conventional polyisocyanurate foams, for improved handling.

APPLICATIONS

Trymer 200L foam is used extensively in composite panel applications. It has a low index compared to conventional polyisocyanurate foams, a feature that offers improved shear, tensile and flexural strengths, and allows better adhesion to facers using standard adhesives. The foam is also compatible with most thermoset resin adhesives, including vinyl esters and epoxies. JM can provide general guidelines and recommendations for Trymer 200L foam.

Call 1-800-231-1024 or contact your local JM representative for details. Some typical applications include

- Core material for insulated architectural and structural panels
- Core material for factory built panelized construction systems
- Insulation for shipping containers, trucks or railcars
- Core material for boats and yacht hulls
- Core material for military shelter applications

SIZE

Height: 24" (60cm)
Width: 48" (122 cm)
Length: 96" (244 cm)
Custom lengths are also available. Contact your local JM representative for details.

ENVIRONMENTAL DATA

Trymer 200L foam is specifically formulated to provide excellent thermal insulation properties without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, Trymer 200L foam is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

PHYSICAL/CHEMICAL PROPERTIES

Trymer 200L foam exhibits the properties and characteristics indicated in Table 1 when tested as represented.
Like all cellular polymers, this product will degrade upon prolonged exposure to sunlight. A covering must be used to block ultraviolet radiation and prevent degradation. Other coverings to protect the foam from the elements and to meet applicable fire regulations may also be required. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

FIRE PROTECTION

Consideration should be given to the benefits of and the costs of additional fire protection gained by installing automatic fire detection, alarm and suppression systems. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

SAFETY CONSIDERATIONS

Trymer 200L foam requires care in handling. All persons who work with this material must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) and handling guide contain information on the safe handling, storage and use of this material. For a copy of the MSDS, call 1-800-231-1024, visit www.jm.com or contact your local JM representative.

FABRICATION/INSTALLATION

Trymer 200L foam is easy to fabricate into various sizes and shapes to meet specific design needs. However, because of the critical technical design aspects of many of its applications, JM recommends that qualified designers or consultants design the total system. Contact a local JM representative or access the literature library at www.jm.com for more specific instructions.

AVAILABILITY

Trymer 200L foam is distributed through an extensive network of fabricators and distributors. For more information, call 1-800-231-1024.

TECHNICAL SERVICES

JM can provide technical information to help address questions when using Trymer 200L foam. Technical personnel are available at 1-800-231-1024.

PHYSICAL PROPERTIES OF TRYMER CORE PIR 200L

Property & Test Method	Value
Density, ASTM D1622	2.0 lb/ft^3 (32.0 kg/m^3)
Compressive Strength, ASTM D1621	30 lb/in^2 (207 kPa) parallel to rise
Compressive Modulus, ASTM D1621	750 lb/in^2 (5171 kPa) parallel to rise
Shear Strength, ASTM C273	23 lb/in^2 (159 kPa) parallel to rise
Shear Modulus, ASTM C273	260 lb/in^2 (1793 kPa) parallel to rise
Tensile Strength, ASTM D1623	30 lb/in^2 (207 kPa) 3D average
Tensile Modulus, ASTM D1623	1200 lb/in^2 (8274 kPa)
Flexural Strength, ASTM C203	39 lb/in^2 (269 kPa)
Flexural Modulus, ASTM C203	590 lb/in^2 (4068 kPa)
Closed cell Content, ASTM D6226	95%
k-Factor, ASTM C518 75°F (24°C) mean temp	0.190 Btu•in/hr•ft^2•°F 0.027 W/m°C
R-value per Inch, ASTM C578, Aged 180 Days	5.3 hr•ft^2 •°F/Btu 0.93 m^2 •°C/W
Dimensional Stability, ASTM D2126	At -30°F (-34°C) for 7 Days: -0.4 At 158°F (70°C), 97% R.H., for 7 Days: 2.0 At 200°F (38°C), for 7 Days: 0.8
Water Absorption, ASTM C272	<0.7% by vol. after 24-hour immersion
Service Temperature	-297°F to 300°F (-183°C to 149°C)
Surface Burning Characteristics, ASTM E84	25 Flame Spread 450 Smoke Developed (up to 4" thickness)

Johns Manville

717 17th St.
Denver, CO 80202
(800) 231-1024
JM.com

05/18/20 (Replaces T200L-05/07/20)

DESCRIPTION

Trymer® 250L rigid polyisocyanurate insulation is a cellular polymer supplied in bunstock form. It is ideal for applications where a mid density, intermediate compressive strength core material is needed. This product is easily fabricated into sheets and is less brittle for improved handling over conventional polyisocyanurate foams.

APPLICATIONS

Trymer Core PIR 250L Rigid Foam Insulation is used extensively in composite foam panel applications. It has a low index compared to conventional polyisocyanurate foams. This feature offers improved shear, tensile and flexural strengths, as well as allowing better adhesion to facers when using standard adhesives. The foam is also compatible with most thermoset resin adhesives, including vinyl esters and epoxies. JM can provide general guidelines and recommendations for Trymer Core PIR 250L foam. Call 1-800-231-1024 or contact your local JM representative for details. Some typical applications include:

- Core material for insulated architectural and structural panels
- Core material for factory built panelized construction systems
- Insulation for shipping containers, trucks or railcars
- Core material for boats and yacht hulls
- Core material for military shelter applications

SIZE

Height: 20" (56cm)
Width: 48" (122 cm)
Length: 96" (244 cm)
Custom lengths are also available. Contact your local JM representative for details.

ENVIRONMENTAL DATA

Trymer Core PIR 250L foam is specifically formulated to provide excellent thermal insulation properties without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, Trymer Core PIR 250L foam is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

PHYSICAL/CHEMICAL PROPERTIES

Trymer Core PIR 250L foam exhibits the properties and characteristics indicated in Table 1 when tested as represented. As with all cellular plastics, Trymer Core PIR 250L insulation will degrade upon prolonged exposure to sunlight. A covering to block ultraviolet radiation must be used to prevent this degradation. Other coverings to protect the insulation from the elements and to meet applicable fire regulations may also be required. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

FIRE PROTECTION

Consideration should be given to the benefits of and the costs of additional fire protection gained by installing automatic fire detection, alarm and suppression systems. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

SAFETY CONSIDERATIONS

Trymer Core PIR 250L foam requires care in handling. All persons who work with this material must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) and handling guide contain information on the safe handling, storage and use of this material. For a copy of the MSDS, call 1-800-231-1024, visit www.JM.com or contact your local JM representative.

FABRICATION/INSTALLATION

Trymer Core PIR 250L foam is easy to fabricate into various sizes and shapes to meet specific design needs. However, because of the critical technical design aspects of many of its applications, JM recommends that qualified designers or consultants design the total system. Contact a local JM representative or access the literature library at www.JM.com for more specific instructions.

AVAILABILITY

Trymer Core PIR 250L foam is distributed through an extensive network of fabricators and distributors. For more information, call 1-800-231-1024.

TECHNICAL SERVICES

JM can provide technical information to help address questions when using Trymer Core PIR 250L foam. Technical personnel are available at 1-800-231-1024.

PHYSICAL PROPERTIES OF TRYMER CORE PIR 250 L

Property & Test Method	Value
Density, ASTM D1622	2.5 lb/ft^3 (40 kg/m^3)
Compressive Strength, ASTM D1621	40 lb/in^2 (275 kPa) parallel to rise
Compressive Modulus, ASTM D1621	1000 lb/in^2 (6894 kPa) parallel to rise
Shear Strength, ASTM C273	30 lb/in^2 (206 kPa) parallel to rise
Shear Modulus, ASTM C273	340 lb/in^2 (2344 kPa) parallel to rise
Tensile Strength, ASTM D1623	55 lb/in^2 (400 kPa) 3D average
Tensile Modulus, ASTM D1623	1050 lb/in^2 (7240 kPa)
Flexural Strength, ASTM C203	55 lb/in^2 (379 kPa)
Flexural Modulus, ASTM C203	880 lb/in^2 (6067 kPa)
Closed cell Content, ASTM D6226	95%
k-Factor, ASTM C518 75°F (24°C) mean temp	0.190 Btu•in/hr•ft^2•°F 0.027 W/m°C
R-value per Inch, ASTM C578, Aged 180 Days	5.3 hr•ft^2 •°F/Btu 0.93 m^2 •°C/W
Dimensional Stability, ASTM D2126	At -30°F (-34°C) for 7 Days: -0.2 At 158°F (70°C), 97% R.H., for 7 Days: 1.2
Water Absorption, ASTM C272	<0.7% by vol. after 24-hour immersion
Service Temperature	-297°F to 300°F (-183°C to 149°C)
Surface Burning Characteristics, ASTM E84	25 Flame Spread 130 Smoke Developed (up to 4" thickness)

Johns Manville

717 17th St.
Denver, CO 80202
(800) 231-1024
JM.com

05/18/20 (Replaces T250L-05/07/20)

TRYMER® CORE PIR 350L
POLYISOCYANURATE FOAM INSULATION

DESCRIPTION
Trymer® Core PIR 350L polyisocyanurate foam is a cellular polymer supplied in bunstock form. It is ideal for applications in which a lightweight, high-density core material is needed. This product is easily fabricated into sheets and other shapes and is less brittle than conventional polyisocyanurate foams, for improved handling.

APPLICATIONS
Trymer Core PIR 350L foam is used extensively in composite panel applications. It has a low index compared to conventional polyisocyanurate foams, a feature that offers improved shear, tensile and flexural strengths, and allows better adhesion to facers using standard adhesives. The foam is also compatible with most thermoset resin adhesives, including vinyl esters and epoxies.

JM can provide general guidelines and recommendations for Trymer Core PIR 350L foam. Call 1-800-231-1024 or contact your local JM representative for details. Some typical applications include:

- Core material for insulated architectural and structural panels
- Core material for factory built panelized construction systems
- Insulation for shipping containers, trucks or railcars
- Core material for boats and yacht hulls
- Core material for military shelter applications

SIZE
Height: 16" (41cm)
Width: 48" (122 cm)
Length: 96" (244 cm)
Custom lengths are also available. Contact your local JM representative for details.

ENVIRONMENTAL DATA
Trymer Core PIR 350L foam is specifically formulated to provide excellent thermal insulation properties without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, Trymer Core PIR 350L foam is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

PHYSICAL/CHEMICAL PROPERTIES
Trymer Core PIR 350L foam exhibits the properties and characteristics indicated in Table 1 when tested as represented. Like all cellular polymers, this product will degrade upon prolonged exposure to sunlight. A covering must be used to block ultraviolet radiation and prevent degradation. Other coverings to protect the foam from the elements and to meet applicable fire regulations may also be required. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

FIRE PROTECTION
Consideration should be given to the benefits of and the costs of additional fire protection gained by installing automatic fire detection, alarm and suppression systems. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

SAFETY CONSIDERATIONS
Trymer Core PIR 350L foam requires care in handling. All persons who work with this material must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) and handling guide contain information on the safe handling, storage and use of this material. For a copy of the MSDS, call 1-800-231-1024, visit www.JM.com or contact your local JM representative.

FABRICATION/INSTALLATION
Trymer Core PIR 350L foam is easy to fabricate into various sizes and shapes to meet specific design needs. However, because of the critical technical design aspects of many of its applications, JM recommends that qualified designers or consultants design the total system. Contact a local JM representative or access the literature library at www.JM.com for more specific instructions.

AVAILABILITY
Trymer Core PIR 350L foam is distributed through an extensive network of fabricators and distributors. For more information, call 1-800-231-1024.

TECHNICAL SERVICES
JM can provide technical information to help address questions when using Trymer Core PIR 350L foam. Technical personnel are available at 1-800-231-1024.

*Click here for the Trymer 2500 in Cryogenic applications data sheet.

05/18/20 (Replaces T350L 05/07/20)

PHYSICAL PROPERTIES OF TRYMER CORE PIR 350 L

Property & Test Method	Value
Density, ASTM D1622	3.5 lb/ft^3 (56.1 kg/m^3)
Compressive Strength, ASTM D1621	60 lb/in^2 (414 kPa) parallel to rise
Compressive Modulus, ASTM D1621	1300 lb/in^2 (8963 kPa) parallel to rise
Shear Strength, ASTM C273	35 lb/in^2 (241 kPa) parallel to rise
Shear Modulus, ASTM C273	390 lb/in^2 (2688 kPa) parallel to rise
Tensile Strength, ASTM D1623	60 lb/in^2 (414 kPa) 3D average
Tensile Modulus, ASTM D1623	1200 lb/in^2 (8273 kPa)
Flexural Strength, ASTM C203	90 lb/in^2 (621 kPa)
Flexural Modulus, ASTM C203	1170 lb/in^2 (8066 kPa)
Closed cell Content, ASTM D6226	95%
k-Factor, ASTM C518 75°F (24°C) mean temp	0.190 Btu•in/hr•ft^2•°F 0.027 W/m°C
R-value per Inch, ASTM C578, Aged 180 Days	5.3 hr•ft^2 •°F/Btu 0.93 m^2 •°C/W
Dimensional Stability, ASTM D2126	At 158°F (70°C), 97% R.H., for 7 Days: 1.0% Change At 200°F (93°C), 97% R.H., for 7 Days: 0.2% Change
Water Absorption, ASTM C272	<0.7% by vol. after 24-hour immersion
Service Temperature	-297°F to 300°F (-183°C to 149°C)
Surface Burning Characteristics, ASTM E84	25 Flame Spread 450 Smoke Developed (up to 4" thickness)

Johns Manville

717 17th St.
Denver, CO 80202
(800) 231-1024
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05/18/20 (Replaces T350L 05/07/20)

DESCRIPTION

Trymer® Core PIR 400L polyisocyanurate foam is a cellular polymer supplied in bunstock form. It is ideal for applications in which a lightweight, high-density core material is needed. This product is easily fabricated into sheets and other shapes and is less brittle than conventional polyisocyanurate foams, for improved handling.

APPLICATIONS

Trymer Core PIR 400L foam is used extensively in composite panel applications. It has a low index compared to conventional polyisocyanurate foams, a feature that offers improved shear, tensile and flexural strengths, and allows better adhesion to facers using standard adhesives. The foam is also compatible with most thermoset resin adhesives, including vinyl esters and epoxies.

JM can provide general guidelines and recommendations for Trymer Core PIR 400L foam. Call 1-800-231-1024 or contact your local JM representative for details. Some typical applications include:

- Core material for insulated architectural and structural panels
- Core material for factory built panelized construction systems
- Insulation for shipping containers, trucks or railcars
- Core material for boats, containers, trucks, and railcar components

SIZE

Height: 14" (35.5cm)
Width: 48" (122 cm)
Length: 96" (244 cm)
Custom lengths are also available. Contact your local JM representative for details.

ENVIRONMENTAL DATA

Trymer Core PIR 400L foam is specifically formulated to provide excellent thermal insulation properties without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, Trymer Core PIR 400L foam is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

PHYSICAL/CHEMICAL PROPERTIES

Trymer Core PIR 400L foam exhibits the properties and characteristics indicated in Table 1 when tested as represented. Like all cellular polymers, this product will degrade upon prolonged exposure to sunlight. A covering must be used to block ultraviolet radiation and prevent degradation. Other coverings to protect the foam from the elements and to meet applicable fire regulations may also be required. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

FIRE PROTECTION

Consideration should be given to the benefits of and the costs of additional fire protection gained by installing automatic fire detection, alarm and suppression systems. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

SAFETY CONSIDERATIONS

Trymer Core PIR 400L foam requires care in handling. All persons who work with this material must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) and handling guide contain information on the safe handling, storage and use of this material. For a copy of the MSDS, call 1-800-231-1024, visit www.JM.com or contact your local JM representative.

FABRICATION/INSTALLATION

Trymer Core PIR 400L foam is easy to fabricate into various sizes and shapes to meet specific design needs. However, because of the critical technical design aspects of many of its applications, JM recommends that qualified designers or consultants design the total system. Contact a local JM representative or access the literature library at www.JM.com for more specific instructions.

AVAILABILITY

Trymer Core PIR 400L foam is distributed through an extensive network of fabricators and distributors. For more information, call 1-800-231-1024.

TECHNICAL SERVICES

JM can provide technical information to help address questions when using Trymer Core PIR 400L foam. Technical personnel are available at 1-800-231-1024.

*Click here for the Trymer 2500 in Cryogenic applications data sheet.

PHYSICAL PROPERTIES OF TRYMER CORE PIR 400 L

Property & Test Method	Value
Density, ASTM D1622	4.1 lb/ft^3 (57.7 kg/m^3)
Compressive Strength, ASTM D1621	75 lb/in^2 (517 kPa) parallel to rise
Compressive Modulus, ASTM D1621	1300 lb/in^2 (8963 kPa) parallel to rise
Shear Strength, ASTM C273	40 lb/in^2 (276 kPa) parallel to rise
Shear Modulus, ASTM C273	500 lb/in^2 (3447 kPa) parallel to rise
Tensile Strength, ASTM D1623	75 lb/in^2 (517 kPa) 3D average
Tensile Modulus, ASTM D1623	2400 lb/in^2 (16547 kPa)
Flexural Strength, ASTM C203	100 lb/in^2 (689 kPa)
Flexural Modulus, ASTM C203	3000 lb/in^2 (20684 kPa)
Closed cell Content, ASTM D6226	95%
k-Factor, ASTM C518 75°F (24°C) mean temp	0.190 Btu•in/hr•ft^2•°F 0.027 W/m°C
R-value per Inch, ASTM C578, Aged 180 Days	5.3 hr•ft^2 •°F/Btu 0.93 m^2 •°C/W
Dimensional Stability, ASTM D2126	At -30°F (-34°C), for 7 Days: 0.02% At 158°F (70°C), 97% R.H., for 7 Days: -0.25% Change At 200°F (93°C), 97% R.H., for 7 Days: -1.47% Change
Water Absorption, ASTM C272	<0.7% by vol. after 24-hour immersion
Service Temperature	-297°F to 300°F (-183°C to 149°C)
Surface Burning Characteristics, ASTM E84	10 Flame Spread 90 Smoke Developed (up to 8" thickness)

Johns Manville

717 17th St.
Denver, CO 80202
(800) 231-1024
JM.com

05/18/20 (Replaces T400L-05/07/20-250)

Johns Manville

717 17th St.
Denver, CO 80202
800-866-3234
JM.com

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of the products listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you for current information.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit www.jm.com/terms-conditions or call (800) 654-3103.

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